

Starch derivatives - Determination of the composition of glucose syrups, fructose syrups and hydrogenated glucose syrups - Method using high-performance liquid chromatography

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 10504:2000 sisaldab Euroopa standardi EN ISO 10504:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 08.08.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 10504:2000 consists of the English text of the European standard EN ISO 10504:2000.</p> <p>This document is endorsed on 08.08.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard describes a high-performance liquid chromatographic (HPLC) method for measuring the composition of dextrose solutions, glucose syrups, fructose-containing syrups, hydrogenated glucose syrups, sorbitol, mannitol and maltitol. The constituents are mainly glucose, maltose, maltotriose, sorbitol, mannitol, maltitol and malto-oligosaccharides.</p>	<p>Scope:</p> <p>This standard describes a high-performance liquid chromatographic (HPLC) method for measuring the composition of dextrose solutions, glucose syrups, fructose-containing syrups, hydrogenated glucose syrups, sorbitol, mannitol and maltitol. The constituents are mainly glucose, maltose, maltotriose, sorbitol, mannitol, maltitol and malto-oligosaccharides.</p>
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ICS 67.180.20

Võtmesõnad:

English version

Starch derivatives

**Determination of the composition of glucose syrups, fructose syrups
and hydrogenated glucose syrups – Method using high-performance
liquid chromatography
(ISO 10504 : 1998)**

Produits dérivés de l'amidon –
Détermination de la composition des
sirops de glucose, des sirops de
fructose, et des sirops de glucose
hydrogénés – Méthode par chroma-
tographie en phase liquide à haute
performance (ISO 10504 : 1998)

Stärke und Stärkederivate – Bestim-
mung der Zusammensetzung von
Glucosesirup, Fructosesirup und
hydriertem Glucosesirup – Hoch-
leistungsflüssigchromatographisches
Verfahren (ISO 10504 : 1998)

This European Standard was approved by CEN on 2000-01-15.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 10504 : 1998 Starch derivatives – Determination of the composition of glucose syrups, fructose syrups and hydrogenated glucose syrups – Method using high-performance liquid chromatography,

which was prepared by ISO/TC 93 'Starch (including derivatives and by-products)' of the International Organization for Standardization, has been adopted by CEN/CS as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by August 2000 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 10504 : 1998 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

1 Scope

This International Standard describes a high-performance liquid chromatographic (HPLC) method for measuring the composition of dextrose solutions, glucose syrups, fructose-containing syrups, hydrogenated glucose syrups, sorbitol, mannitol and maltitol. The constituents are mainly glucose, maltose, maltotriose, fructose, sorbitol, mannitol, maltitol and malto-oligosaccharides.

The use of a column packed with cation-exchange resin is essential.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of the publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

ISO 5381:1983, *Starch hydrolysis products — Determination of water content — Modified Karl Fischer method*.

3 Principle

Saccharide components are separated using high-performance liquid chromatography. Separation is achieved using a cation-exchange column with water as the eluent. The eluted components are detected by means of a differential refractometer, and quantified using an electronic integrator.

4 Reagents

All reagents used shall be of recognized analytical reagent grade.

4.1 Special distilled water

The water used may be double-distilled of quality grade 1 in accordance with ISO 3696. The most suitable is demineralized water, which prevents contamination of the ion-exchange resin.